AMENDMENT TO TITLE:

Please replace the **Title** of the application to read:

--APPARATUS FOR DETECTING A FIRE BY IR IMAGE PROCESSING--.

AMENDMENTS TO SPECIFICATION:

Please delete **paragraph 0008**.

Please amend **paragraph 0001** as follows:

--This is a continuation application of the co-pending U.S. Patent Application No. 10/047,097, filed January 14, 2002, which issued as U.S. Patent No. 6,696,958 on February 24, 2004 and entitled "Method of Detecting a Fire By IR Image Processing".--

Please amend **paragraph 0002** as follows:

--The present invention relates to detecting fires by image processing, in general, and more ~~particularly, to a method of detecting~~ particularly to an apparatus that detects a fire in a scene by infrared (IR) radiation image processing.--

Please amend **paragraph 0006** as follows:

--The present invention is ~~directed to a method of detecting~~ directed to an apparatus that detects fires through image processing which overcomes the drawbacks of the present methods, especially for enclosed areas, and provides for distinguishing between types of fires.--

Please amend **paragraph 0007** as follows:

--In accordance with one aspect of the present invention, an apparatus that detects a fire in a scene by infrared radiation image processing includes a means for receiving a sequential plurality of infrared radiation images of the scene, a means for generating for each said image an array of picture elements (pixels), a means for determining for each pixel a value that is representative of the pixel's portion of infrared radiation intensity in the array of the scene image, means for determining a threshold value from the values of the pixels of at least one image, means for identifying a region of at least one pixel in one image of the plurality of images of the scene by comparing the values of the pixels

of the one image to the determined threshold value, means for tracking said region through images of the plurality subsequent said one image to determine a change of said region that meets predetermined infrared radiation criteria, and means for detecting the fire in the scene based on the determined change of said region. ~~invention, a method of detecting a fire in a scene by infrared radiation image processing comprises the steps of: receiving a sequential plurality of infrared radiation images of the scene, each image including an array of picture elements (pixels), each pixel having a value that is representative of the pixel's portion of infrared radiation intensity in the array of the scene image; identifying a region of at least one pixel in one image of the plurality of images of the scene based on pixel values; tracking the region through images of the plurality subsequent the one image to determine a change of the region that meets predetermined infrared radiation criteria; and detecting the fire in the scene based on the determined change of the region. In one embodiment, the step of tracking includes the steps of: identifying the region in images of the plurality subsequent the one image; and comparing the identified regions of the one and subsequent images to determine a change of the region that meets the predetermined infrared radiation criteria. In another embodiment, the step of detecting the fire includes the steps of: identifying the region in sequential images of a predetermined period of time subsequent the one image; comparing the identified regions of the one and sequential images to determine motion changes of the region; calculating a motion value of the region based on the determined motion changes thereof; and determining fire of a certain type based on the motion value of the region.--~~